

CLAIMS

We claim:

- 5 1. An isolated peptide comprising an antigenic epitope of an HCV protein, wherein the protein is selected from the group consisting of core protein, NS3 protein, NS4 protein and NS5a protein.
- 10 2. The peptide of Claim 1, wherein the protein is the core protein and the antigenic epitope comprises amino acid residues 1-91 of the HCV polyprotein (SEQ ID NO:1).
- 15 3. The peptide of Claim 1, wherein the protein is the NS3 protein and the antigenic epitope comprises amino acid residues 1471-1573 of the HCV polyprotein (SEQ ID NO:2).
- 20 4. The peptide of Claim 1, wherein the protein is the NS4 protein and the antigenic epitope comprises amino acid residues 1789-1867 of the HCV polyprotein (SEQ ID NO:3).
- 25 5. The peptide of Claim 1, wherein the protein is the NS4 protein and the antigenic epitope comprises amino acid residues 1916-1948 of the HCV polyprotein (SEQ ID NO:4).
6. The peptide of Claim 1, wherein the protein is the NS5a protein and the antigenic epitope comprises amino acid residues 2322-2423 of the HCV polyprotein (SEQ ID NO:5).
- 30 7. A mosaic polypeptide comprising one or more antigenic epitopes of the HCV core protein, NS3 protein, and NS4 protein.

8. The mosaic polypeptide of Claim 7, further comprising one or more antigenic epitopes of the HCV NS5a protein.

5 9. The mosaic polypeptide of Claim 7, wherein the antigenic epitope of the core protein comprises amino acid residues 1-91 of the HCV polyprotein (SEQ ID NO:1).

10 10. The mosaic polypeptide of Claim 7, wherein the antigenic epitope of the NS3 protein comprises amino acid residues 1471-1573 of the HCV polyprotein (SEQ ID NO:2).

15 11. The mosaic polypeptide of Claim 7, wherein the antigenic epitope of the NS4 protein comprises amino acid residues 1789-1867 of the HCV polyprotein (SEQ ID NO:3).

20 12. The mosaic polypeptide of Claim 7, further comprising a second antigenic epitope of the NS4 protein, wherein the second antigenic epitope comprises amino acid residues 1916-1948 of the HCV polyprotein (SEQ ID NO:4).

25 13. The mosaic polypeptide of Claim 8, wherein the antigenic epitope of the NS5a protein comprises amino acid residues 2322-2423 of the HCV polyprotein (SEQ ID NO:5).

14. An assay for detecting HCV in a biological sample comprising combining the biological sample with an HCV reagent for a sufficient amount of time under conditions to form an analyte-antibody complex and detecting the complex,

5 wherein the HCV reagent is selected from the group consisting of an antigenic epitope of an HCV core, NS3, NS4 or NS5a protein; a mosaic polypeptide comprising one or more antigenic epitopes of an HCV core, NS3, or NS4 protein; an antibody specifically immunoreactive with an antigenic epitope of
10 an HCV core, NS3, NS4 or NS5a protein; and an antibody specifically immunoreactive with a mosaic polypeptide comprising one or more antigenic epitopes of an HCV core, NS3, or NS4 protein,

15 wherein detection of the analyte-antibody complex indicates that the biological sample contains HCV.

15. The assay of Claim 14, wherein the mosaic polypeptide further comprises one or more antigenic epitopes of the HCV NS5a protein.
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16. The assay of Claim 14, wherein the antigenic epitope of the core protein comprises amino acid residues 1-91 of the HCV polyprotein (SEQ ID NO:1).

25 17. The assay of Claim 14, wherein the antigenic epitope of the NS3 protein comprises amino acid residues 1471-1573 of the HCV polyprotein (SEQ ID NO:2).

30 18. The assay of Claim 14, wherein the antigenic epitope of the NS4 protein comprises amino acid residues 1789-1867 of the HCV polyprotein (SEQ ID NO:3).

35 19. The assay of Claim 14, wherein the antigenic epitope of the NS4 protein comprises amino acid residues 1916-1948 of the HCV polyprotein (SEQ ID NO:4).

20. The assay of Claim 14, wherein the mosaic polypeptide further comprises a second antigenic epitope of the NS4 protein, which comprises amino acid residues 1916-1948 of the HCV polyprotein (SEQ ID NO:4).

21. The assay of Claim 14, wherein the antigenic epitope of the NS5a protein comprises amino acid residues 2322-2423 of the HCV polyprotein (SEQ ID NO:5).

22. The assay of Claim 15, wherein the antigenic epitope of the NS5a protein comprises amino acid residues 2322-2423 of the HCV polyprotein (SEQ ID NO:5).

23. An immunogenic composition comprising an immunogenic amount of an isolated peptide comprising an antigenic epitope of an HCV protein, wherein the protein is selected from the group consisting of core protein, NS3 protein, NS4 protein and NS5a protein and a pharmaceutically acceptable carrier.

24. An immunogenic composition comprising an immunogenic amount of a mosaic polypeptide comprising one or more antigenic epitopes of the HCV core protein, NS3 protein, and NS4 protein and a pharmaceutically acceptable carrier.

25. The immunogenic composition of Claim 24 wherein the mosaic polypeptide further comprises one or more antigenic epitopes of the HCV NS5a protein.